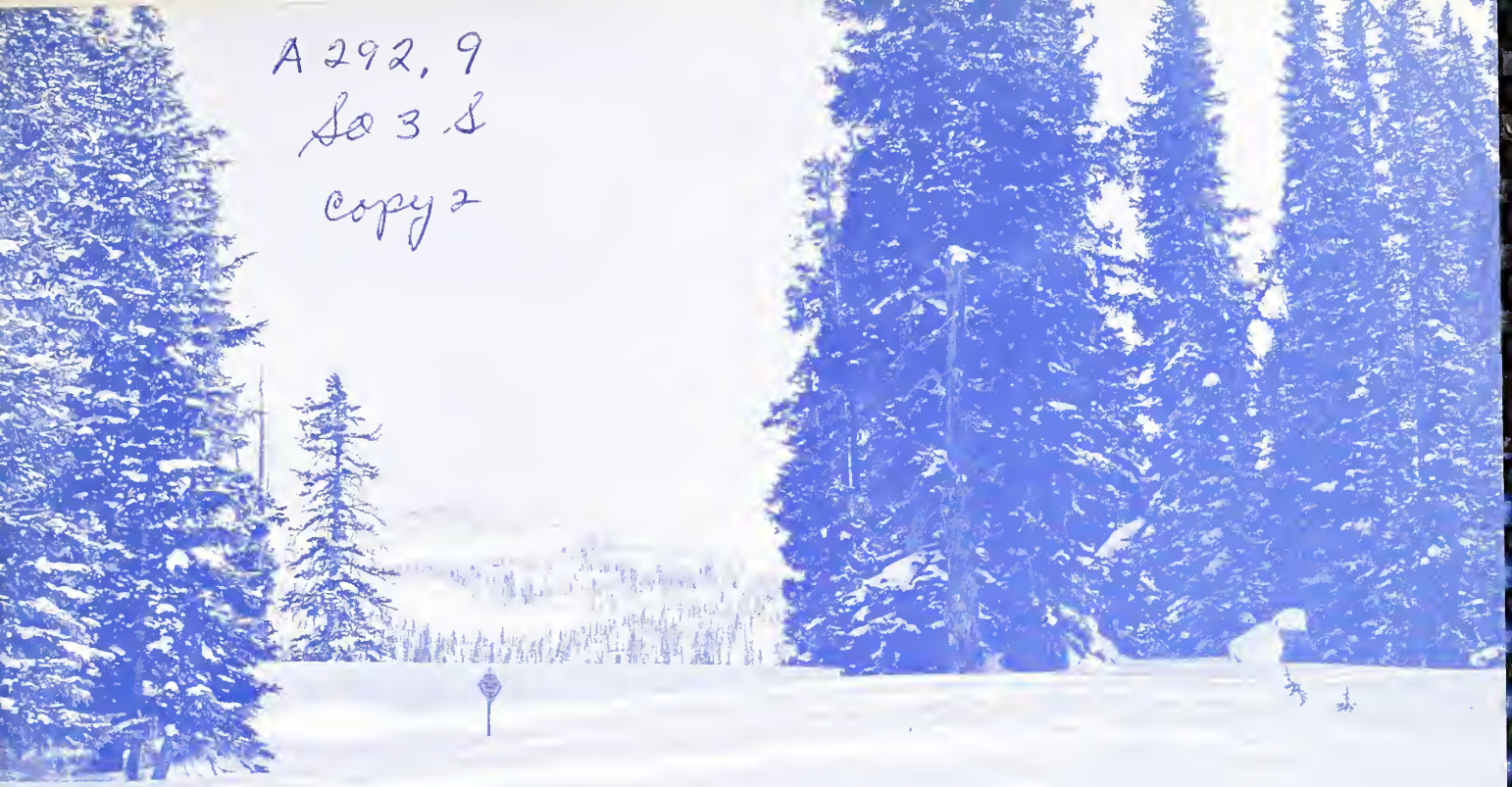


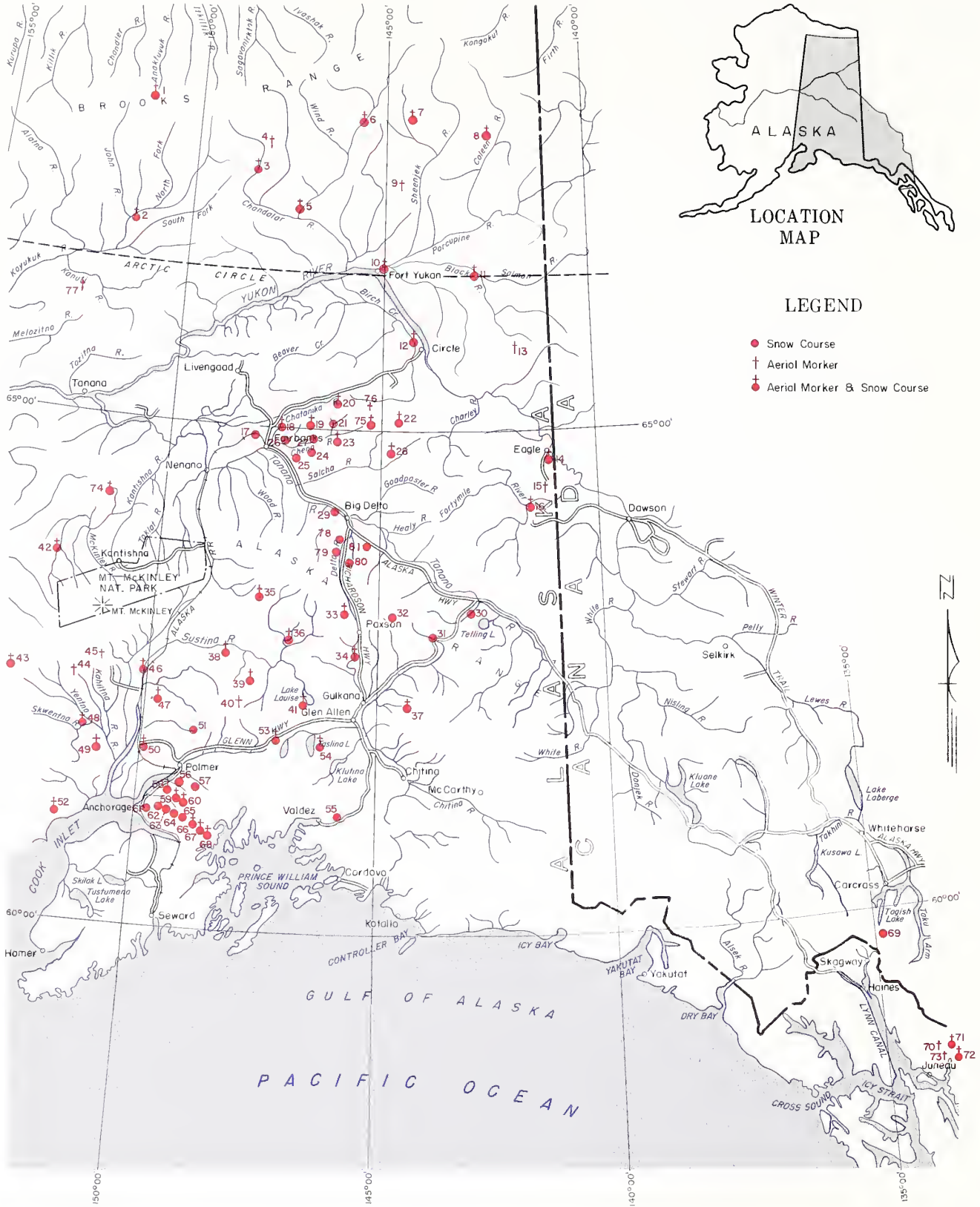
FEDERAL - STATE - PRIVATE

COOPERATIVE SNOW SURVEYS for ALASKA

U. S. DEPARTMENT of AGRICULTURE , SOIL CONSERVATION SERVICE
and
ALASKA SOIL CONSERVATION DISTRICT

Data included in this report were obtained by the agencies named above in cooperation with the U.S. Army Corps of Engineers, Alaska Power Administration, Alaska Highway Dept., Alaska Department of Fish and Game and University of Alaska, Greater Anchorage Area Borough, and others.

AS OF
APR. 1, 1968



SNOW COURSES for ALASKA

SNOW SURVEYS *for* ALASKA

Report Prepared by

T. G. FREEMAN, SNOW SURVEY SUPERVISOR

Issued by

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
BLAINE O. HALLIDAY, STATE CONSERVATIONIST
P. O. BOX F, PALMER, ALASKA

INDEX OF ALASKA SNOW COURSES

MAP NO.	COURSE NAME	COURSE NO.	ELEV.	MAP NO.	COURSE NAME	COURSE NO.	ELEV.
1	Anaktuvuk Pass	51TT1A	2100	42	Lake Minchumina	52OO1A	730
2	Bettles Field	51RR1A	640	43	Farewell Lake	53NN1A	1090
3	Chandalar Lake	48SS1A	2040	44	Chelatna Lake	51NN1a	1650
4	Squaw Lake	48SS2a	2150	45	Peters Hills	50NN1a	2010
5	Venetie	46SS1A	610	46	Talkeetna	50NN2	350
6	Arctic Village	45TT1A	2300	47	Bald Mt. Lake	49NN1A	2150
7	Koness Lake	44SS1A	1790	48	Skwentna	51MM1A	158
8	Coleen River	42SS1A	1100	49	Alexander Lake	50MM1A	200
9	Vundik Lake	43SS1a	950	50	Willow Airstrip	59MM2	150
10	Fort Yukon	44RR1A	425	51	Independence Mine	49MM7	3300
11	Black River	42RR1A	650	52	McArthur	51LL1A	120
12	Circle City	44QQ3A	600	53	Sheep Mountain	45MM1	2700
13	Bull Lake	42QQ1a	950	54	St. Anne's Lake	46MM1A	1985
14	Eagle Village	41PP1A	900	55	Worthington Glacier	45MM2	2400
15	Boundary	41PP3A	3300	56	Moraine	48MM1	2100
16	Chicken Airstrip	41PP2A	1650	57	Ptarmigan	48MM2	3000
17	Yak Pasture	47PP1	540	58	Marmot	48MM8A	2000
18	Cleary Summit	47QQ1A	2230	59	Goat	48MM7A	3200
19	Little Chena	46QQ2A	2200	60	Grizzly	48MM4A	5000
20	Mt. Ryan	46QQ1A	2950	61	Arctic Valley #1	49MM1	500
21	Chena Hot Springs	46QQ3	1250	62	Arctic Valley #2	49MM2	1000
22	Big Windy	44QQ2A	3850	63	Arctic Valley #3	49MM3	2030
23	Munson Ridge	46PP1A	3100	64	Arctic Valley #4	49MM4	2330
24	French Creek	46PP2	2010	65	Arctic Ski Bowl	49MM5	3000
25	Little Salcha	46PP3	1500	66	Bird Creek	49MM6A	2350
26	Glenn Creek	47PP2	925	67	Ship Creek	49MM7A	1750
27	Colorado Creek	46PP4	750	68	Indian Pass	49MM8A	2350
28	Caribou Mine	45PP2A	1115	69	Log Cabin (B.C.)	35KK1	2880
29	Big Delta	45PP1	975	70	Upper Long Lake	33JJ2a	1000
30	Tok Junction	43OO1	1650	71	Long Lake	33JJ1A	1075
31	Mentasta Pass	43NN1	2430	72	Speel River	33JJ3A	275
32	Mankomen Lake	44NN1	3050	73	Crater Lake	33JJ4a	1750
33	Fielding Lake	45OO1A	3000	74	Wien Lake	55PP1A	1020
34	Haggard Creek	45NN1A	2540	75	Upper Chena	44QQ3A	3000
35	Monahan Flat	47OO1A	2710	76	Wolf Creek	44QQ4a	3850
36	Clearwater Lake	46NN1A	3100	77	Lake Todatonten	52RR1a	985
37	Sanford River	44NN2a	2280	78	Ft. Greely	45001	1420
38	Fog Lakes	48NN1A	2270	79	Meadows Road	45002	1570
39	Oshetna Lake	47NN1A	2950	80	Donnelly Dome	45003	2200
40	Little Nelchina	47NN2a	4160	81	Granite Creek	45004	1235
41	Lake Louise	46NN2A	2400				

M-3120-2 USDA SCS-PORTLAND, ORE. 1966

APRIL 1968

Snowfall was light throughout the State during the month of March. Many areas received no additional snow, and warm weather during the month actually reduced the water content of the accumulated snow in portions of Interior Alaska.

The Chena watershed had a substantially above average snowpack on March 1. Warm dry weather during the month caused a considerable change in the situation, and snow cover in that region was just average by April 1.

Most of Interior Alaska has near average snow conditions. Exceptions to this are the drainage areas of the Susitna, Koyokuk, and Chandalar rivers where heavy snowfall was received early in the winter. Snow cover in these areas is well above normal.

Soil moisture is deficient in the Tanana, Chena, and Upper Yukon watersheds. It is expected that the dry soil will absorb a good portion of the water when snowmelt begins.

YUKON above RAMPART

Snow in the upper Yukon drainage is generally near normal except in the western portion of the Chandalar River area, where it is above average. Most of the Alaska portion of the region received very little additional snowfall during March. Some increase was measured on the Eagle Village and Chandalar Lake snow courses but snow conditions in other areas remained the same as on March 1. A substantial increase in snow-water equivalent was measured on the Log Cabin snow course at the headwaters of the Yukon River in British Columbia.

TANANA-CHENA

No additional snow fell in the Chena watershed during the month of March and warm temperatures caused much of the snow cover at the lower elevation to melt. The snowpack on March 1 was approximately 140% of average and 120% of last year. On April 1 the situation was completely changed. Snow surveys in the area on April 1 show a snowpack of 91% of average and only 78% of last year. Most of the Upper Tanana drainage has near normal snow conditions. However, portions of the Alaska Range draining into the Tanana have a heavier than average snowpack. Much of the snow in the Big Delta area has melted.

MATANUSKA-SUSITNA-COPPER

Although little additional snow fell on the Susitna drainage area during the past month, the snow cover remains well above average. The heaviest snow cover is in the western portion of the Talkeetna Mountains. Low elevation snow in the Matanuska and Copper watersheds is below average. Snow cover at the higher elevations is considerably greater than last year.

KUSKOKWIM

Some additional snow was received on the Kuskokwim drainage during the past month but the snowpack in this area is well below normal. High winds and warm weather removed much of the snow in the vicinity of Farewell.

KOYOKUK

Snow cover is very heavy on the Koyokuk watershed. Although little additional snow fell during March, the total depth and water content is considerably greater than normal. Snow-water equivalent measured on the Bettles Field course was 12.4 inches, which is as much as the average annual precipitation reported for this area.

COASTAL DRAINAGE

Much of the snow at lower elevations in the Anchorage area has melted. High elevation snow in the Chugach Range is substantially greater than last year.

SNETTISHAM DRAINAGE

Although a substantial snowfall was received on the watershed in March, the total snow cover is well below average. Snow surveys indicate only about 50% of that measured last year.

ALASKA SNOW SURVEYS

Previous

ORAINAGE BASIN AND SNOW COURSE	MAP NO.	OATE OF SURVEY	SNOW OEPTH (INCHES)	WATER CONTENT (INCHES)	WATER CONTENT		YEARS OF RECORO
					LAST YEAR	AVERAGE *	
YUKON DRAINAGE:							
Chandalar Lake	3	4/3/68	30	6.1	3.5	3.6	2
Squaw Lake	4	4/3/68A	28	5.7E	3.2	-	1
Venetie	5	4/3/68	16	3.1	3.4	3.3	2
Arctic Village	6	4/2/68	22	4.1	3.2	3.4	4
Koness Lake	7	4/2/68	19	3.4	2.9	-	1
Coleen River	8	4/2/68A	17	3.1	3.1	3.0	2
Vundik Lake	9	4/2/68	16	3.3	3.4	-	1
Fort Yukon	10	4/2/68	16	3.2	4.9	4.0	2
Black River	11	4/2/68	21	4.7	4.8	3.9	3
Circle City	12	4/2/68	24	4.5	5.2	4.2	2
Bull Lake	13	4/2/68A	26	5.5E	5.6	-	1
Eagle Village	14	4/1/68	27	6.5	5.3	5.0	2
Boundary	15	4/1/68A	28	6.2E	6.0	-	1
Chicken Airstrip	16	4/1/68	20	3.8	3.5	3.4	2
Log Cabin	69	3/28/68	33	9.7	11.5	14.0	8
TANANA-CHENA Drainage:							
Yak Pasture	17	3/27/68	24	5.4	5.2	3.8	8
Cleary Summit	18	3/15/68A	24	6.0E	5.2	4.2	4
		3/27/68	29	7.1	7.3	6.5	8
Little Chena	19	3/15/68A	24	6.0E	5.9	5.2	5
		4/1/68	26	5.0	7.8	5.6	6
Mt.Ryan	20	3/15/68A	27	6.8E	7.1	5.6	5
		4/1/68	31	6.8	10.7	7.8	6
Chena Hot Springs	21	3/15/68A	22	5.5E	-	-	-
		4/1/68	21	4.2	6.3	4.0	4
Big Windy	22	3/15/68A	14	3.6E	4.6	3.7	5
		4/1/68	19	3.8	5.8	3.4	4
Munson Ridge	23	3/15/68A	43	12.5E	9.6	9.4	5
		4/1/68	45	12.1	12.5	15.5	6
French Creek	24	3/27/68	27	7.7	10.8	7.7	6
Little Salcha	25	3/27/68	24	6.9	8.9	6.4	6
Glenn Creek	26	2/15/68	21	4.0	3.2	3.5	2
		3/4/68	20	4.3	-	-	-
Wolf Creek	76	3/15/68A	27	6.8E	-	-	-
		4/1/68A	24	6.0E	-	-	-
Upper Chena	75	3/15/68A	37	9.2E	-	-	-
		4/1/68	38	9.3	10.2	-	1
Colorado Creek	27	4/1/68	22	4.3	6.6	6.4	2
Caribou Mine	28	3/15/68A	17	4.2E	6.9	-	1
		4/1/68	21	4.9	7.4	7.0	2
Tok Junction	30	3/28/68	20	4.4	6.0	3.6	8
Big Delta	29	3/27/68	11	2.9	5.3	2.7	8
Mentasta Pass	31	3/28/68	28	7.3	7.1	6.1	6
Fielding Lake	33	3/28/68	49	14.2	8.3	11.8	7
Fort Greely	78	3/28/68	14	3.2	7.2	-	1
Meadows Road	79	3/28/68	0	0	6.0	-	1
Donnelly Dome	80	3/28/68	21	5.1	14.3	-	1
Granite Creek	81	3/29/68	16	3.8	-	-	-

(*) Average for Period of Record

ALASKA SNOW SURVEYS

Previous

DRAINAGE BASIN AND SNOW COURSE	MAP NO.	DATE OF SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	WATER CONTENT		YEARS OF RECORD
					LAST YEAR	AVERAGE *	
TANANA-CHENA (Continued)							
Bonanza Creek	-	3/29/68	26	5.6	-	-	-
Wien Lake	74	4/4/68	20	3.6	-	-	-
COPPER RIVER Drainage:							
Mankomen Lake	32	3/1/68	42	7.6	4.6	-	1
Haggard Creek	34	3/28/68	28	6.3	6.7	5.2	4
Sanford River	37	3/28/68	24	5.4	6.0	-	1
St.Anne's Lake	54	3/28/68	31	6.4	5.8	5.3	4
MATANUSKA-SUSITNA Drainage:							
Monahan Flat	35	3/28/68	38	8.2	5.2	5.2	4
Clearwater Lake	36	3/28/68	24	4.8	4.2	4.6	4
Fog Lakes	38	3/28/68	28	6.9	3.8	-	4
Oshetna Lake	39	3/29/68	20	3.3	4.6	3.7	4
Little Nelchina	40	3/29/68A	22	5.3E	-	-	-
Lake Louise	41	3/29/68	28	4.6	6.0	4.0	4
Chelatna Lake	44	No Measurement			9.2	9.9	3
Peters Hills	45	No Measurement			-	-	-
Talkeetna	46	3/28/68	37	10.6	7.7	-	1
Bald Mtn.Lake	47	3/29/68	43	12.1	5.5	5.1	4
Skwentna	48	3/28/68	49	13.6	9.0	-	1
Alexander Lake	49	3/28/68	39	11.4	9.7	10.3	4
Willow Airstrip	50	3/28/68	23	5.3	-	6.1	3
Independence M Mine	51	4/3/68	70	25.6	-	-	1
Sheep Mountain	53	4/2/68	24	4.7	6.1	4.9	10
KUSKOKWIM Drainage							
Lake Minchumina	42	4/4/68	21	4.5	6.2	-	1
Farewell Lake	43	4/4/68	16	4.1	5.2	-	1
KOYOKUK Drainage							
Anaktuvuk Paaa	1	No Measurement			-	-	-
Bettles Field	2	4/3/68	47	12.4	8.3	-	1
Lake Todatonten	77	4/4/68A	37	8.9E	-	-	-
COASTAL Drainage							
McArthur	52	3/28/68A	70	23.8E	20.2	20.0	4
Worthington Glacier	55	4/2/68	72	24.6	13.6	20.6	10
Moraine	56	4/4/68	25	7.5	6.6	9.2	11
Ptarmigan	57	4/4/68	33	8.8	8.3	10.0	11
Marmot	58	No Measurement			18.8	-	1
Goat	59	4/4/68	43	12.8	8.6	-	1
Grizzly	60	No Measurement			12.8	-	1
Arctic Valley #1	61	4/2/68	T	T	2.2	1.8	4

(*) Average for Period of Record

ALASKA SNOW SURVEYS

Previous

DRAINAGE BASIN AND SNOW COURSE	MAP NO.	DATE OF SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	WATER CONTENT		YEARS OF RECORD
					LAST YEAR	AVERAGE *	
COASTAL Drainage (Continued)							
Arctic Valley #2	62	4/2/68	T	T	3.0	2.5	4
Arctic Valley #3	63	4/2/68	25	5.7	4.8	5.0	4
Arctic Valley #4	64	4/2/68	28	7.4	4.8	5.2	4
Arctic Ski Bowl	65	4/2/68	43	14.5	14.5	12.7	4
Bird Creek	66	3/27/68	54	19.4	11.1	-	1
Ship Creek	67	3/27/68	38	11.4	9.2	-	1
Indian Pass	68	3/27/68	72	23.1	18.1	-	1
SOUTHEAST ALASKA							
Upper Long Lake	70	3/29/68A	72E	25.2	51.3	41.4	3
Long Lake	71	3/29/68	87	27.3	53.8	45.0	3
Speel River	72	3/29/68	52	19.5	39.6	36.4	3
Crater Lake	73	3/29/68A	84E	29.4	74.5	64.0	3
Douglas Ski Bowl	-	3/31/68	73	26.8	-	-	-

(*) Average for Period of Record

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season as they affect runoff will add to be an effective average. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

PUBLISHED BY SOIL CONSERVATION SERVICE

D. A. WILLIAMS, Administrator

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 507, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85205
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	P. O. Box 38, Boise, Idaho 83707
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Building, Salt Lake City, Utah 84111
Washington	360 Federal Office Building, Spokane, Washington 99201
Wyoming	P. O. Box 340, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia

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